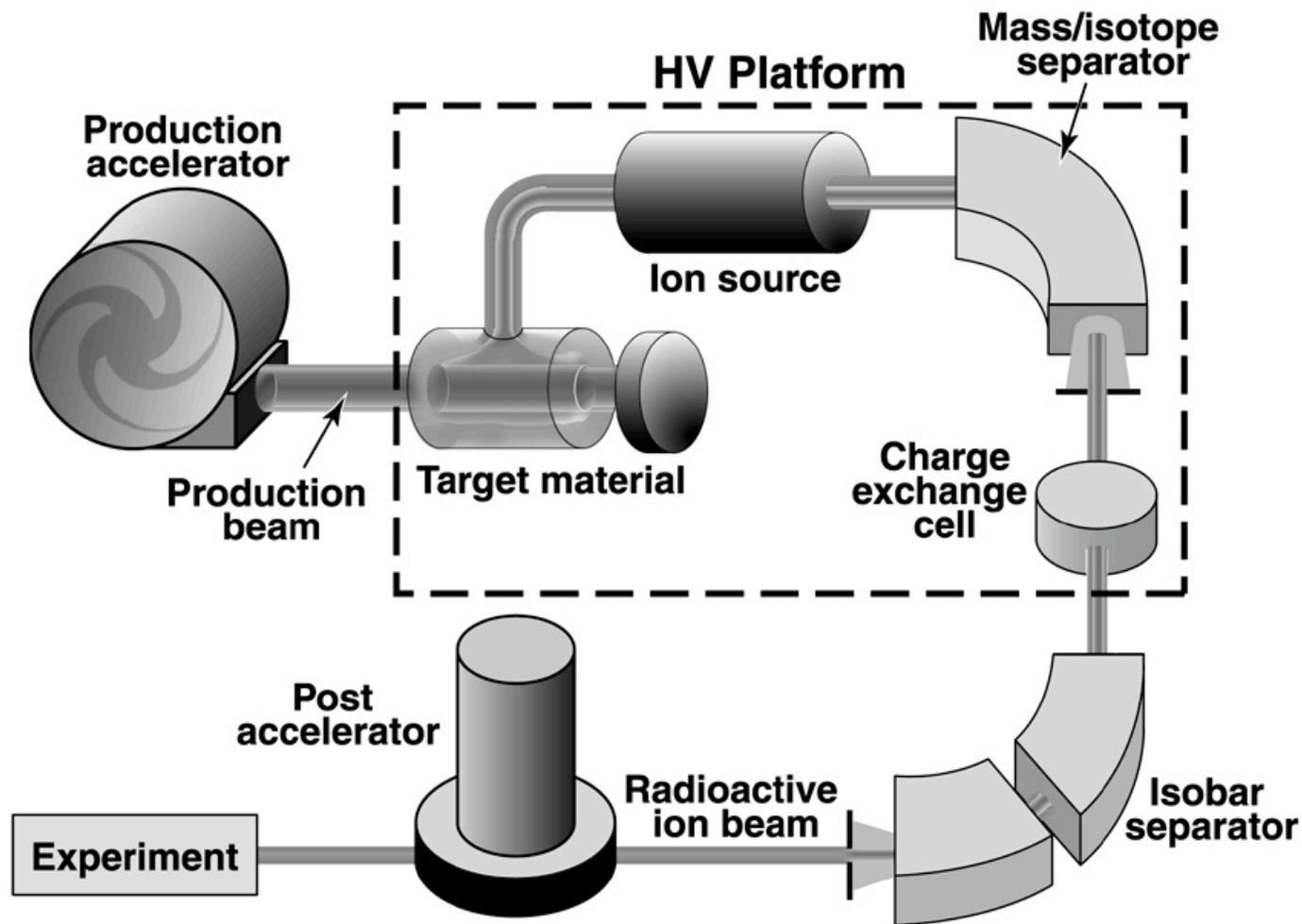


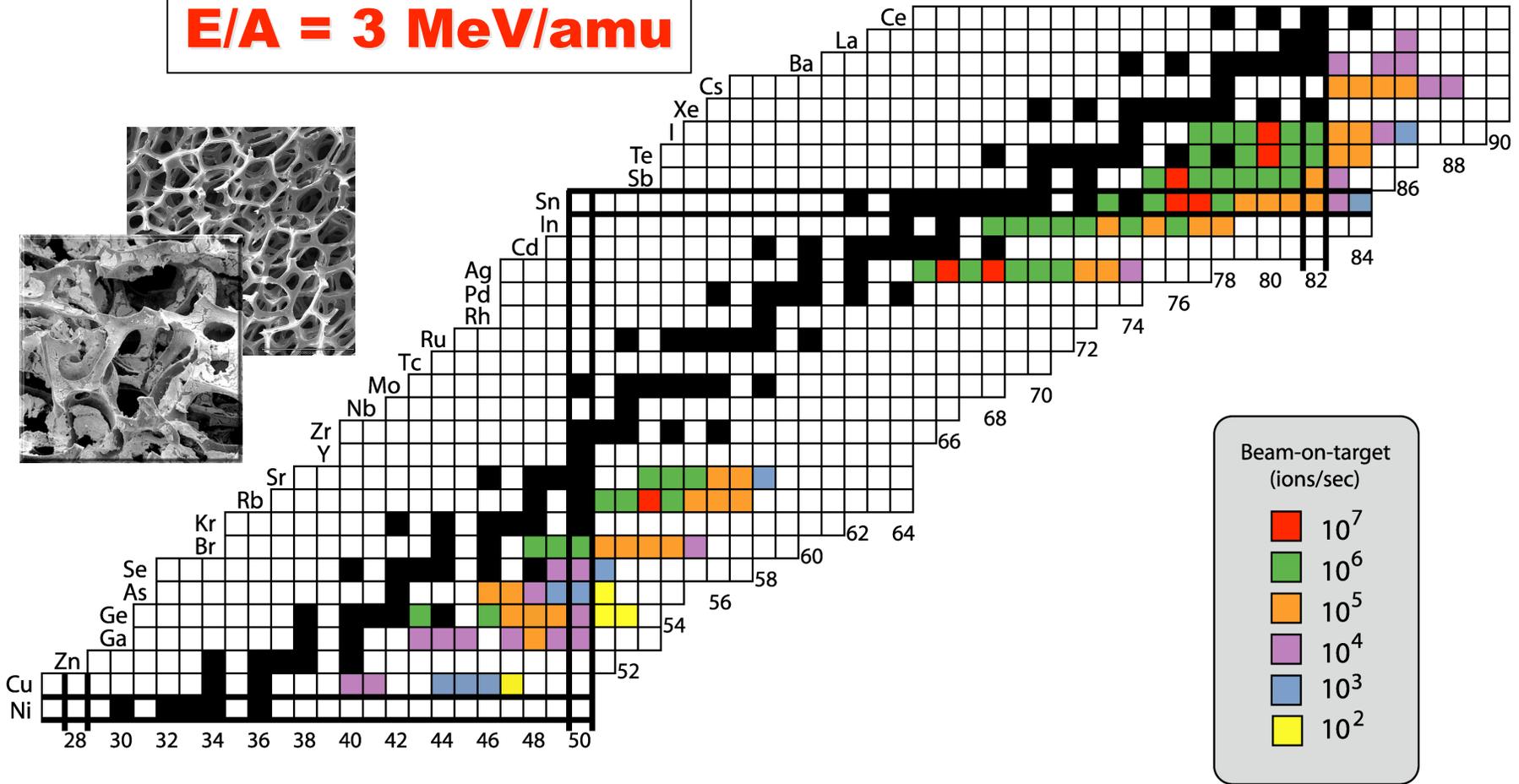
Schematic of RIB Production at the HRIBF



Available Neutron-rich Radioactive Ion Beams

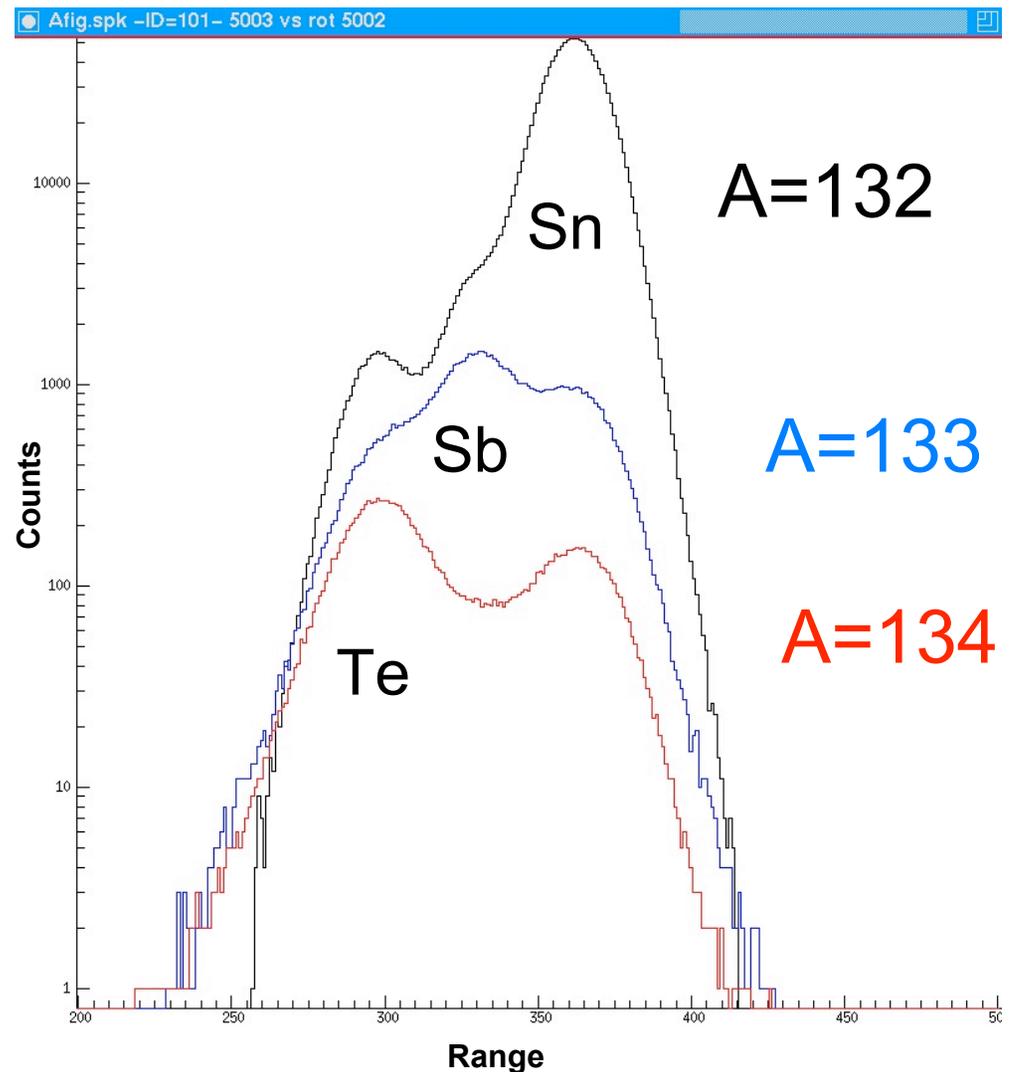
(over 110 beams with intensities $\geq 10^3$ ions/sec)

E/A = 3 MeV/amu



Intensities for Sn, Sb, and Te Isotopes

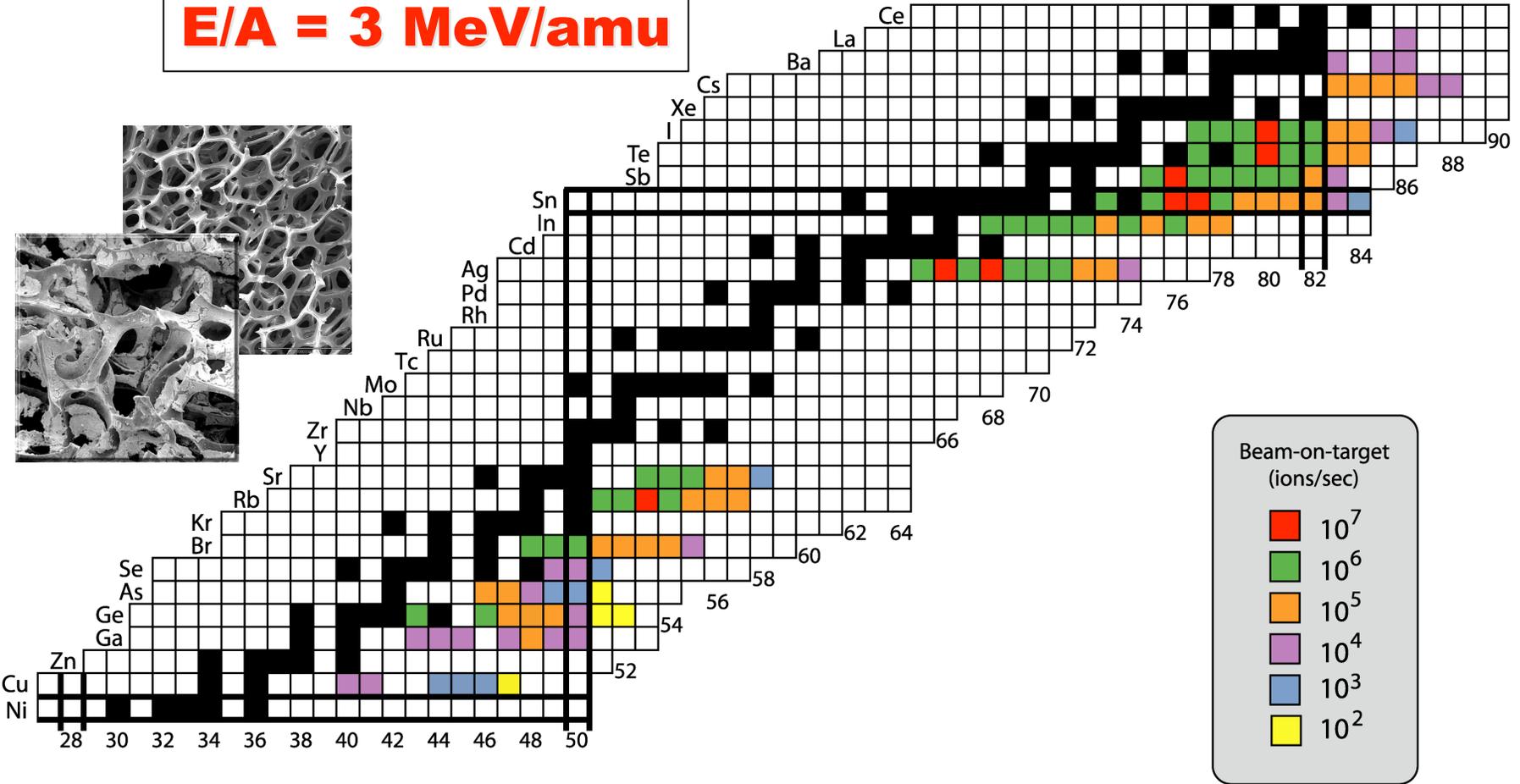
- Measured with Bragg detector (gas chamber)
- Beam energy is 316 MeV
- ^{132}Sn beam intensity is 8.6×10^5 pps (96% of total)
- ^{133}Sn beam intensity is 1.5×10^4 pps (33% of total)
- ^{134}Sn beam intensity is 2.8×10^3 pps (38% of total)
- These beams were extracted as sulfide molecules from the ion source
- The percentages of Sn in the atomic ion beams are $<1\%$
- The $^{134}\text{Sb}/^{133}\text{Sb}$ ratio is small due to a much shorter half-life



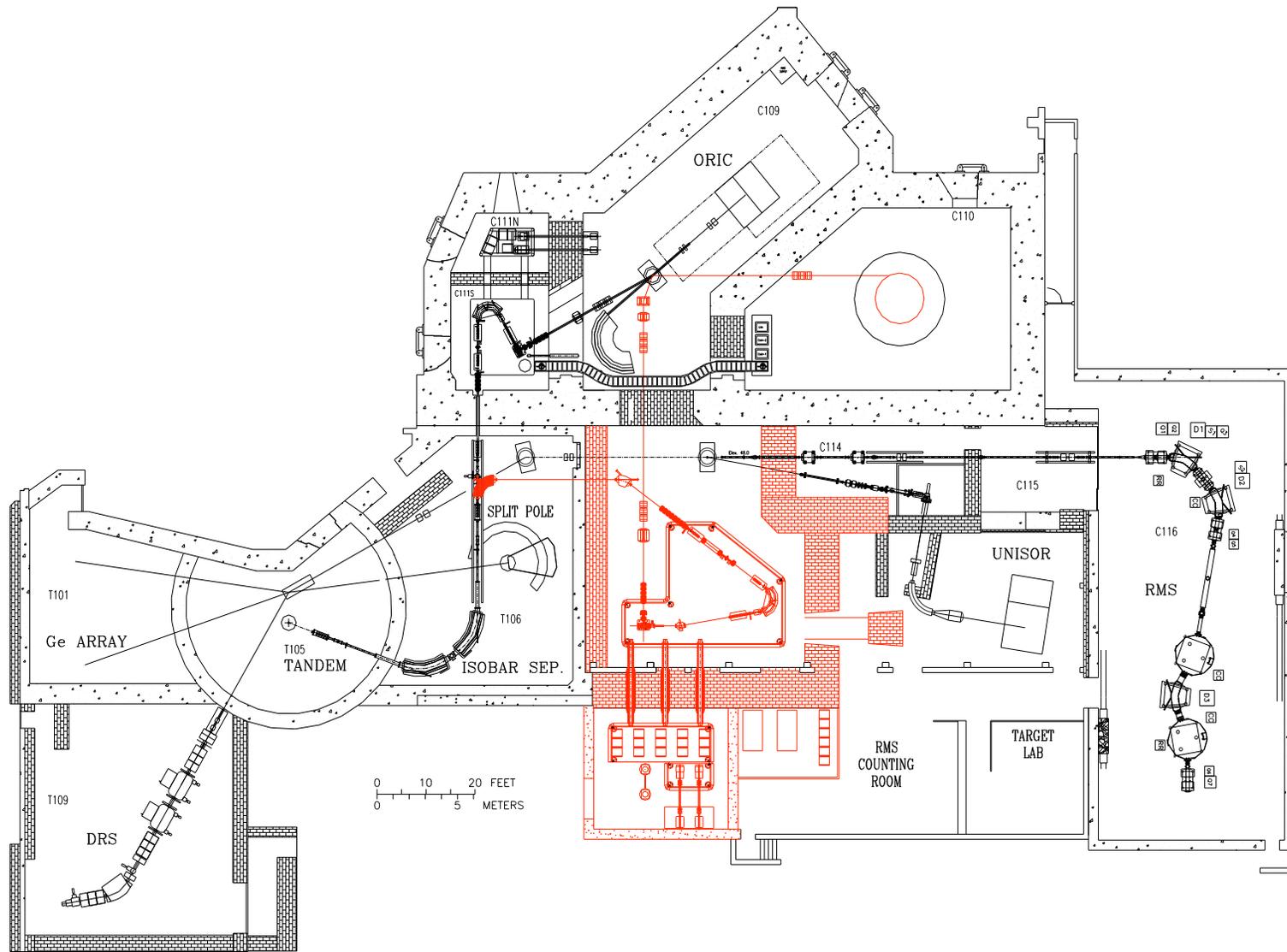
Available Neutron-rich Radioactive Ion Beams

(over 110 beams with intensities $\geq 10^3$ ions/sec)

E/A = 3 MeV/amu



Second Phase: Fully-integrated RIB Injector



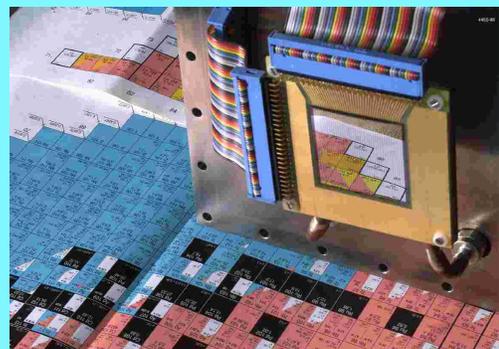
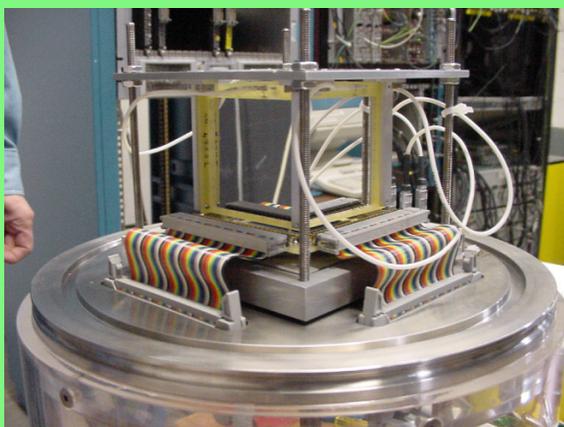
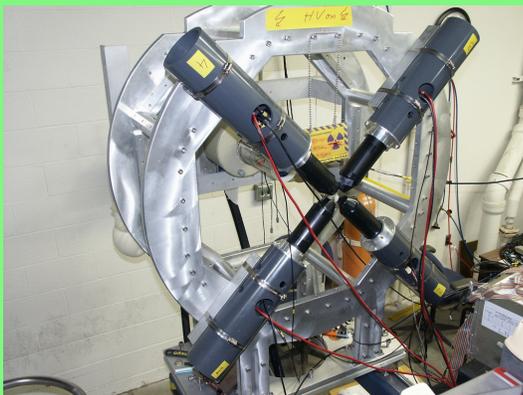
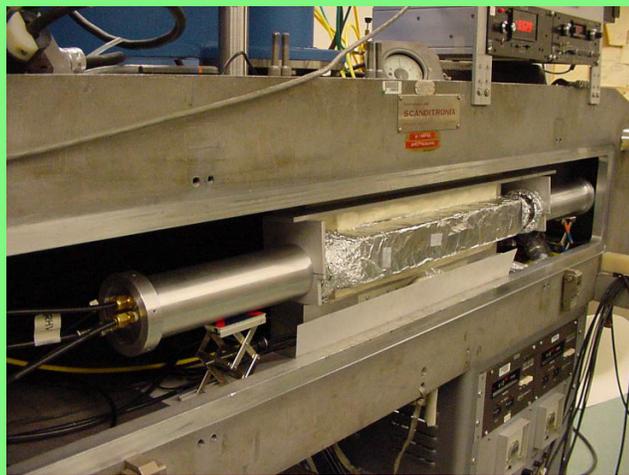
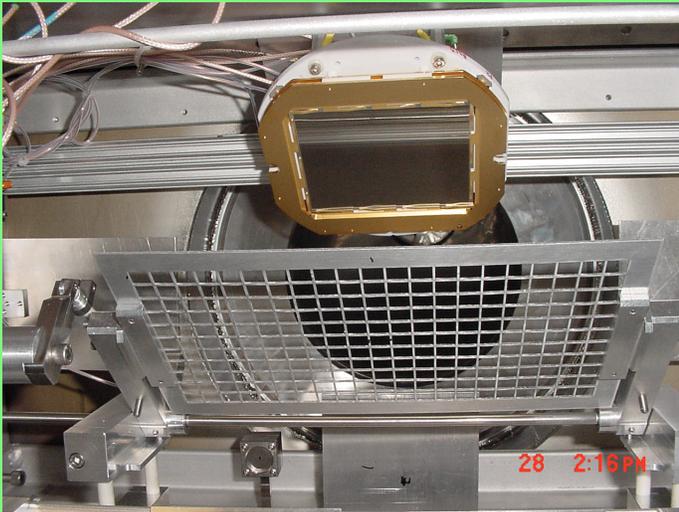
OAK RIDGE NATIONAL LABORATORY
U.S. DEPARTMENT OF ENERGY



Decay Equipment

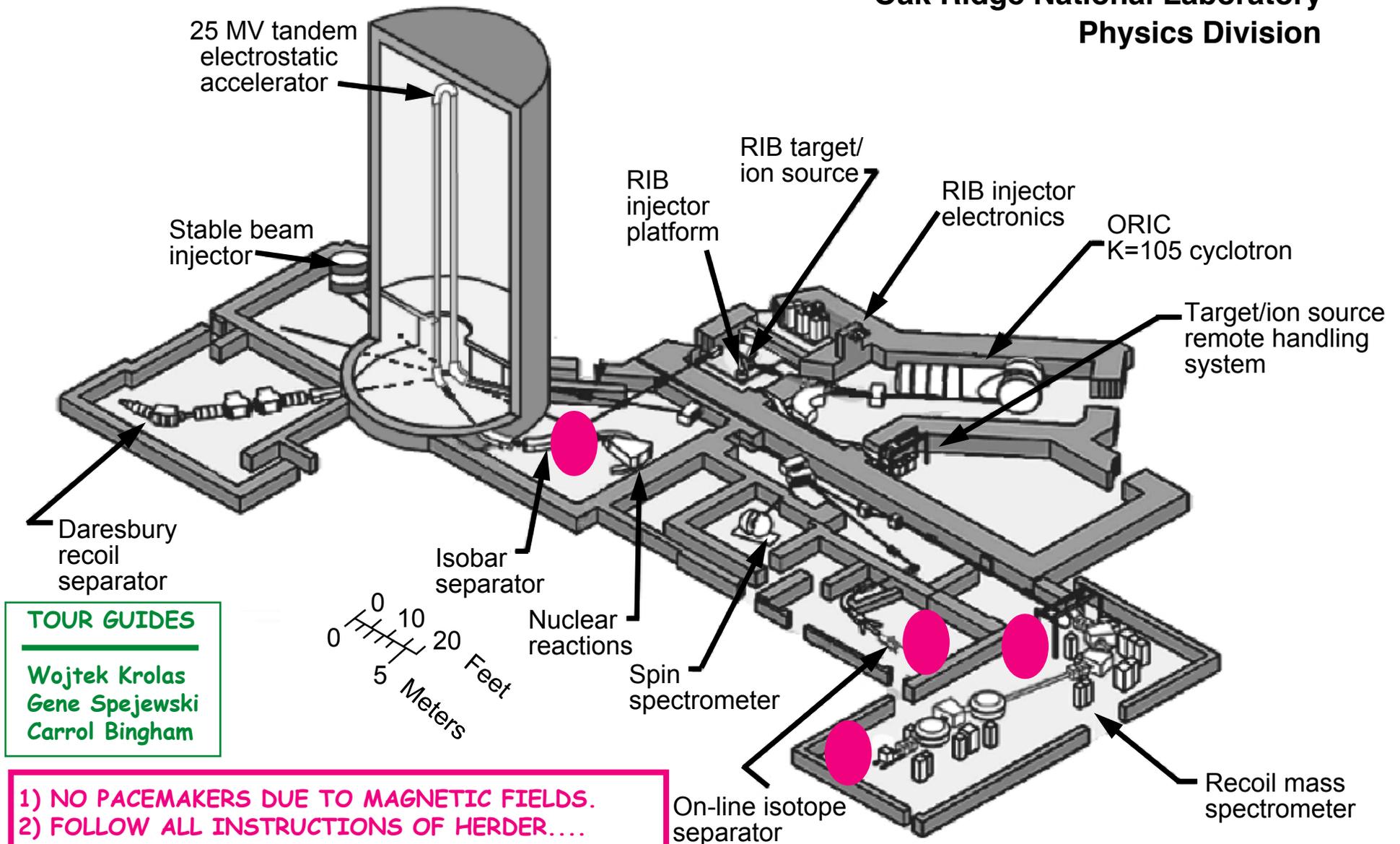
← NEW
MCP
ENGE
BaF2
Si Box

OLD
CARDS
MTC
DSSD
↓



The Holifield Radioactive Ion Beam Facility

Oak Ridge National Laboratory
Physics Division



TOUR GUIDES

Wojtek Krolas
Gene Spejewski
Carrol Bingham

- 1) NO PACEMAKERS DUE TO MAGNETIC FIELDS.
- 2) FOLLOW ALL INSTRUCTIONS OF HERDER.... DO NOT LEAVE THE TOUR.
- 3) VERY BRIEF DESCRIPTION OF WARNING ALARMS.
- 4) REMINDER THAT THE CHANCE OF GETTING A RADIATION DOSE LARGER THAN BACKGROUND IS SLIGHT, BUT WE WISH TO GIVE A CHANCE FOR PREGNANT WOMEN TO STEP OUT OF THE TOUR.